



1962

Personality Correlates of Peer Selected Hospital Corps Students

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Recommended Citation

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PERSONALITY CORRELATES OF PEER SELECTED
HOSPITAL CORPS STUDENTS

by

Esther Florence Ramsay

A Thesis Submitted to the Faculty of the Graduate School
of Loyola University in Partial Fulfillment of
the Requirements for the Degree of
Master of Arts

June

1962

VITA

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ACKNOWLEDGEMENT

The assistance and interest of Dr. Edmund P. Marx and other members of the Loyola University staff is sincerely appreciated.

The author is indebted to the members of the staff of the Neuropsychiatric Service of U.S. Naval Hospital, Great Lakes and particularly to Bruce C. Becker, Staff Psychologist, for his generous expenditure of time, guidance and material.

Indebtedness to the staff of U.S. Naval Hospital Corps School, Great Lakes and particularly to LCDR Norma Coyle, NC, USNR is gratefully acknowledged. The cooperation of the school staff greatly facilitated the collection of data.

The opinions expressed are those of the author and do not necessarily represent the policy of the Naval service.

TABLE OF CONTENTS

Chapter	Page
I. THE PROBLEM AND ITS SETTING.....	1
II. RELATED RESEARCH.....	4
III. PROCEDURE.....	9
SUBJECTS.....	9
DATA GATHERING TECHNIQUES.....	9
THE GUILFORD-ZIMMERMAN TEMPERAMENT SURVEY.....	9
THE QUESTIONNAIRE.....	12
THE COMBINED GCT/ARI.....	13
FINAL GRADE IN THE COURSE.....	13
SPECIFIC PROCEDURE.....	14
ANALYSIS AND STATISTICAL TREATMENT.....	15
IV. RESULTS AND DISCUSSION.....	18
PEER STATUS AND SCHOOL ACHIEVEMENT.....	18
PEER STATUS AND INTELLIGENCE SCORES.....	19
PEER STATUS AND TEMPERAMENT TRAITS.....	21
V. CONCLUSIONS.....	28
SUMMARY.....	30
BIBLIOGRAPHY.....	33
APPENDIX.....	36

LIST OF TABLES

Table I	Page
Correlation between Peer Status and Final Grade, between Peer Status and Combined Score and between Final Grade and Combined Score.....	19
Table II	
Correlations between Peer Status and Scores on the Guilford-Zimmerman Temperament Survey.....	24

CHAPTER I

In the selection and training of Hospital Corpsmen there are several factors which might be studied in the light of peer evaluation. The selection of Hospitalmen for Corps School is done in the Classification Center of Recruit Training and rests heavily on a particular range of intelligence scores. The curriculum of Hospital Corps School is designed to accommodate this range and within the limits of the individual personality any student admitted to the school should be able to complete the course successfully. However, work in hospitals and clinics demands a fairly high degree of success in interpersonal relations, particularly in patient care. Lack of success in this area has been shown to be a handicap to the otherwise intelligent Corpsman who has graduated from Corps School with relatively high scholastic standing. There are probably certain temperament characteristics that are consistently present in "successful" corpsmen.

A Hospital Corpsman in the United States Navy is a man who takes care of patients and applies technical procedures of the allied medical fields. He is trained in basic principles and develops his skill under supervision as he performs the duties assigned at the various medical stations.

In order to isolate the temperament characteristics of Corpsmen it is advisable to start with the Hospital Corps student and use him to determine characteristics of successful Hospitalmen by peer evaluation. Study of the student before studying the Corpsmen in the field is advantageous for several reasons: (1) the student area is an ideal area for foundation work in

personality study with subsequent validation and follow up possible in the field. (2) If the Corpsman is to be successful in the field it is important that he gain a concept of a "good corpsman" early in his training. Peer selectees may be later studied as the prototype of the student concept of Corpsman. Such study might aid in the development of a "professional concept" in contrast to a "socially acceptable" concept. (3) Conditions of living and working in Hospital Corps School provide better than average subject control and selection. (4) Knowledge of significant character and temperament traits applied in the student area would represent economy of time, effort and money involved in training. If such knowledge could subsequently be used with confidence, decrease in attrition during training and control of disciplinary problems and poor performance in the field might be expected.

The present study of the personality correlates of peer selected hospital corps students is based on the following hypotheses:

Hypothesis I. Significant temperament traits of peer selected Hospital Corps students can be demonstrated on a personality test. Consideration of factors other than grades and intelligence is part of the student's concept of a good hospitalman.

Hypothesis II. Peer selection correlates significantly with grades at the end of the course.

Since peer selection is on a student level and since students are aware of the standing of the members of the group they use scholastic standing as a measure of success and as a cue for the selection of a "good corpsman." Moreover, since the successful corpsman would most likely have been interested and at least reasonably studious from the beginning of the course, his grades would

probably have been high.

Hypothesis III. Peer selection for success will correlate positively but not significantly with intelligence scores.

Previous sociometric studies have shown that more commonly than not intelligent individuals are preferred by their peers. However, since as has been noted above, the students under study are enrolled in a course in which the curriculum is arranged to accommodate a particular range of intelligence scores there have been instances in which students with lower intelligence scores have graduated with high grades and have subsequently performed better in the field than students with higher intelligence scores.

CHAPTER II

RELATED RESEARCH

Current sociometric ranking and rating techniques were derived from sociometry, a method advanced by Moreno (1934), for analyzing the feeling or preference relationships among the members of a human group. The original sociometric device as modified by various investigators has been used in measuring the effects of psychotherapy, and of leadership potential. Sociometric measures have been found reliable and significantly related to such criteria as academic grades, ratings of superiors and graduation elimination. Izard (13) presents three studies supporting the assumption that sociometric measures reflect meaningful personality variables which can be reliably measured in terms of observable behavior.

During the past ten years there have been several studies dealing with social status and personality and/or adjustment, described in the literature. Robert French (10) studied Naval Recruits and evaluated their social status as compared with their individual adjustment. The questionnaire used requested nominations of liberty companion, co-volunteer on a dangerous mission and company recruit leader. The status scores were examined in relation to records of neuropsychiatric disturbance, sick bay attendance and disciplinary offenses. Sick bay cases and disciplinary cases appeared to be less acceptable as liberty companions. Disciplinary cases were also less acceptable as mission companions and leaders. There is evidence here that the selected "good corpsman" in the

current study will be a "liked corpsman" which will influence high correlation in this area.

Two interesting studies were done by Bonney, Hoblit and Dreyer (8) and by Mille (18). Male college students who were comparable in age to the subjects in this report were used. Like the subjects reported here, Mille's subjects were also residents of the same dormitory. His research was designed to compare the personalities of male college students who had been shown sociometrically to be the most unpopular individuals in the dormitory with a group who had been found to be the most popular. There were twenty-one subjects in each group.

The technique included use of the MMPI, the Rorschach and the TAT. Mille was seeking optimal adjustment and found that within the limits of the test neither the selectees nor the rejects were optimally adjusted. Probably the most interesting point in his discussion, and one that bears relationship to this study is his statement:

The selects were more frank and open in their behavior, and tended to give others a sense of security through their direct and understandable reactions in interpersonal relationships.

Mille points out, however that some of the selects had achieved their popular status by having learned certain behavioral roles.

Bonney, Hoblit and Dreyer (8) compared the scores on a self-rating scale and a social status score. The self-rating scale purported to measure such traits as: Dominance vs. Submission, Positive Character vs. Immature Dependent Character, Emotional Sensitivity vs. Tough Maturity, Sophisticated vs. Rough Simplicity, Independent Self-Sufficiency vs. Lack of Resolution. When the social status scores were correlated with the scores on each of the sixteen factors of the self-rating scale all of them turned out to be either low

negative, zero or low positive. Bonney felt that these correlations were in accord with, though somewhat lower than those of other similar studies. He does not feel that the lack of relationship indicates a lack of validity of either of the measurements. Rather, he maintains that one of these measurements cannot be validated against the other one. Whereas the self-rating scale purports to measure various psychological conditions within the individual as viewed by himself, the sociometric test is designed to measure group acceptability on a particular criterion.

There is probably a closer relationship between self-adjustment and group acceptability than Bonney shows in his study. The maturity and relative seriousness of the group studied is certainly a factor involved, and one not readily controlled. The current study cannot refute Bonney's point, since we are seeking primarily professional acceptance.

Some interesting characteristics associated with high and low choice status were pointed out by Bonney, et al. (8). He states that several of the rejects corresponded quite closely to the generally accepted descriptions of the psychopathic personality type. These were also traits found by Kidd in a previous study at Michigan State College. By far the largest number of reasons given by the men in Kidd's study for rejecting other men on several sociometric criteria included references to domineering, belligerency, bullying, bragging, loudness, and inconsiderate behavior.

Davids and Parenti (9) studied Personality, Social Choice and Adults' Perception of these factors in groups of disturbed and normal children. His purpose was to investigate relations between social choice and measures of personality in groups of normal children and emotionally disturbed children.

He wished also to compare the degree of mutual choice in the sociometric pattern within the disturbed and normal groups and finally to discover how accurate adults working with these groups of children could perceive their interpersonal relations. The latter point is significant in relationship to the study presented here. Both involve ability to perceive interpersonal relations though the current study uses only normal subjects, evaluated by peers.

Davids found both in the disturbed group and the normal groups that social popularity was significantly associated with good emotional adjustment, possession of positive personality traits and absence of negative traits. In the group of emotionally disturbed children it was found that the disliked subjects tended to be more emotionally disturbed than were the other groups.

A study of Murray (20) is closely associated with the study reported here, in that they both use the Guilford-Zimmerman Temperament Survey. Murray's was a personality study of priests and seminarians. The Guilford-Zimmerman Temperament Survey, a modified version of the MMPI and the Strong Vocational Blank for Men were administered to 200 college students, 200 seminarians and 100 priests. The results were summarized on the basis of significant differences between college groups and clerical groups.

Three other studies in which the Guilford-Zimmerman Temperament Survey was used were presented by Witherspoon, (23) Bendig (7), and Webb (22). Witherspoon studied the relationship between grade-point averages and sectional scores on the Guilford-Zimmerman. Of the ten scales on the Guilford-Zimmerman, three provided low but statistically significant r's with first semester grade point averages of 229 college freshmen.

Bendig studied age differences in the interscale factor structure of the Guilford-Zimmerman Temperament Survey. He tested 100 subjects in different age groups and demonstrated significant increase and decrease of some of the scales with advancing age. This is important in our study of the training and development of Hospitalmen and must be considered in future studies on older Corpsmen in the field.

Webb's was a general test validity study in a Methodist theology school. Several tests were given, among them the Guilford-Zimmerman. Criteria included average grades, grades in selected courses, and rating of written work.

An interesting and important feature of test taking has been reported by Voss (21). His work is from the standpoint of the relationships of response sets. The relationship among three "test taking habits" or response sets was investigated. The types are: (1) The use of one category of response more frequently than other categories. (2) The tendency to give normative responses and (3) the tendency to give socially desirable responses. Each of the three response sets was found to be independent of the other two. Analysis of the relationship of these sets to the trait scales of the MMPI and the Guilford-Zimmerman Temperament Survey indicated that most of the scales were strongly affected by these three types of bias.

The author is aware of the possibility of bias in the present study. The Guilford-Zimmerman is no more vulnerable to bias than are other similar tools. If bias turns out to be obvious in the existing study interpretation will be made accordingly.

CHAPTER III

THE PROCEDURE

Subjects

The subjects of this study were the members of three successive classes in U.S. Naval Hospital Corps School, Great Lakes, Illinois; designated Company 4, Company 6 and Company 8, numbering 25, 28 and 30 male students respectively. The characteristics of the subjects were:

1. Average age 19.351 years
2. Average years of education 11.297
3. Average combined intelligence score (GCT/ARI) 105.405

Members of each company live in the same dormitory in the barracks and share work details between school hours. Some of them have been through recruit training previously together but no effort was made to distinguish men previously acquainted from men who joined the group at the beginning of the Hospital Corps course.

Data Gathering Techniques

The Guilford-Zimmerman Temperament Survey

In 1930 Guilford first suggested that Spearman's technique for testing general, group and specific factors might apply to analysis of personality traits. Three years later he published his attempt to use Thurstone's method of factor analysis identifying four factors of personality.

By 1938 Thurstone had extended and developed his technique and Guilford

re-examined his data. The outcome of this work was the Guilford-Martin Inventory of Factors GAMIN. They were named Social Introversion, Thinking Introversion, Depression, Cycloid, Rhathymia (carefree vs serious) General Activity, Ascendancy, Masculinity, Inferiority Feelings, and Nervousness.

The Guilford inventories STDOR and GAMIN have been used in a wide variety of practical situations, chiefly in counseling services and research activities. Guilford continued his work and ultimately combined his STDOR and GAMIN and the Guilford-Martin Personnel Inventory into a single instrument, the Guilford-Zimmerman Temperament Survey (GZTS). The objectives in planning this tool were: (1) A single booklet of items; (2) a single answer sheet; (3) an efficient scoring method; (4) a coverage of the traits proven to have the greatest utility and uniqueness; and (5) condensation and omission of trait scores where intercorrelations are sufficiently high.

The form of the statement of the items is unusual for inventories of this type. Items are stated affirmatively rather than in question form, using the second person pronoun. Guilford felt that the avoidance of the first person personal pronoun should do something to allay resistance and to increase the operation of the projective principle. The second person pronoun was preferred to the first because it was believed that the statement would seem thus less personal to the examinee. Guilford pointed out that since it is a historical fact that the personality inventory grew out of the interview method, his tool is in essence a systematic, impersonal interview which can be scored.

Estimates of total-score reliabilities were made in various ways, based upon samples of 523 male college students and 329 female students. Kuder-Richardson formulas were applied to the data for men and women separately and

combined. Odd-even and first half-second half correlations were obtained for a random sample of 100 men. The reliability range is from .75 to .87. The estimates of standard error of the obtained scores range from 2.2 to 2.6 and indicate that in general any obtained score does not differ by more than 5 points from the corresponding true score.

The male sample of the scores upon which the norms were based included many veterans, consequently the age range for them was from 18 to 30 with a mean of about 23. There are no very marked sex differences except in trait (m) masculinity.

The internal validity or factorial validity of the scores is fairly well assured by the foundation of factor-analysis studies plus the successive item-analyses directed toward internal consistency and uniqueness.

The factor descriptions are summarized here from Guilford-Zimmerman's own report (11). In each case unless otherwise specified, the high-scoring individual is described.

- G. General Activity: Energetic, rapid-moving, rapid-working person who likes action and may sometimes be impulsive.
- O. Objectivity: Takes an objective, realistic view of things; alert to his environment and can forget himself; not beset with suspicions, hypersensitivity, unwarranted sympathies, anxieties or feelings of guilt.
- F. Friendliness: Agreeableness: Low-scoring individual is easily aroused to aggressive action. High scoring person is friendly and compliant.
- P. Personal Relations: Cooperativeness, tolerance. Low scoring person is given to critical faultfinding generally; has little confidence or trust in others; self-centered and self-pitying.

In the survey the alternative responses to each item are the familiar "yes," "?" and "no." The response "yes" and "no" are preferred to "true" and "false" for the reason that with the latter responses some examinees become too concerned about the actual truth of statements where actually their more spontaneous response, dictated to some extent by feelings, would probably be more diagnostic.

The use of the "?" alternative was determined by unpublished studies. Since the "?" answers are ordinarily given a weight of zero, they influence a trait score in a negative direction. So the forced-choice method might have a tendency to raise all the trait scores somewhat. In his study of forced-choice method Linden (16) did not find this result.

The Questionnaire

The Sociometric device (see appendix) was administered immediately after the subject completed the G-Z Temperament Survey. The questionnaire consisted of three item pairs. The first item of each pair was a positive statement calling for the nomination of five peers (accepting) while the second item of the pair was a parallel negative statement asking for nomination of a second set of five peers (rejecting). Two of the item pairs were directly relevant to adjustment to the Hospital Corps and to proficiency in the Corps, the other item pair was designed to elicit judgments of personal like and dislike. Because the classes were treated separately administratively and sociometric choices were made within the companies the study of the scores was made separately for each company. The size of the companies was comparatively small for generalization so the scores of the companies were compared to validate generalization.

In a pre-examination of the tools, correlations between the pairs of items were shown to be significant. The r's between items one and two and five and six were, .88 and .90 respectively and were high enough to conclude that they represented very similar things in the minds of the subjects. Assuming that to the subjects "adaptation" and "adjustability" were synonymous, the nominations on items five and six were disregarded and only items one and two, and three and four were retained for statistical treatment.

The similarity between the remaining items (r's of .63 and .70) were high enough to warrant combining them for study of peer status. Both pairs were reviewed separately, however and will be discussed from this point of view also.

The Combined GCT (General Classification Test) and ARI (Arithmetic)

The combined score used for intelligence rating is the GCT and ARI scores taken from the subject's classification record. Items in the GCT require a high degree of verbal reasoning primarily aimed at sentence completion and analogy problems. Although not specifically an IQ test, GCT correlates very highly with tests of general intelligence. The scores obtained are expressed in standard score terms with an average of 50 and a standard deviation of 10.

The Arithmetic score is considered important because of the problem which arithmetic and computation present to many of the students. It is also expressed with an average of 50 and a standard deviation of 10 and the two scores combined have been found to be similar to other intelligence test scores.

Final Grade in the Course

At the end of each four week period in the sixteen week course the student is given a grade in each of the subjects he is studying. His final grade is

the over-all average of these quarterly marks. This average is heavily weighted by the patient care grade. This subject is taught by the same instructor through the entire sixteen weeks. It takes in both theory and practical work and represents an instructor evaluation as well as a test score.

Specific Procedure

On Wednesday of the 10th week of a 16 week course in Class A Hospital Corps School, students were given two tests: (1) The Guilford-Zimmerman Temperament Survey and (2) a Sociometric Questionnaire.

Members of the various groups were asked not to discuss the tests when they had completed the work. This was to prevent members of Co6 and Co8 from being influenced by previous knowledge.

In administering the Guilford-Zimmerman instructions were read aloud to the subjects:

"In this booklet you will find a number of statements. Read each statement carefully. If the statement is true, or if you agree with it, mark answer "yes" on your sheet. If the statement is more false than true, or if you disagree with it, mark "no." If you cannot decide between "yes" and "no" you may mark "?" BUT AVOID DOING THIS IF POSSIBLE."

At this point the change was introduced. Subjects were forced to make a choice between "yes" and "no." The instructions continued: "Be sure to answer every item. There are no "right" or "wrong" answers in the usual sense of a high score being necessarily the best. The purpose of this survey will be served best if you describe yourself and state your opinions as accurately as possible. You may notice that many items are similar. Actually no two items are exactly alike. Notice that the numbering of items on the answer sheet

follows across the rows rather than down the columns."

Testing conditions were those of a standard classroom. Tests were administered under supervision during the last regular class period. Although this intensified the "student" situation it was believed that it would help control the attitude since it would not infringe on the students' free time.

Analysis and Statistical Treatment

Ranking of scores on the Sociometric Scale was done by taking the algebraic sum of the accepting and rejecting votes for each subject and ranking them from highest to lowest. Sets of scores on all other tests were likewise ranked from highest to lowest on the following code.

After all the tests had been scored the sets of scores were ranked from highest to lowest on the following code.

<u>Test Number</u>	<u>Symbol</u>	<u>Explanation</u>
7	G	General Activity
8	R	Restraint
9	A	Ascendancy
10	S	Sociability - social interest
11	E	Emotional Stability
12	GCT	General Classification Test Score
13	GCT/ARI	Combined GCT and Arithmetic
14	O	Objectivity
15	F	Friendliness
16	T	Thoughtfulness
17	P	Personal Relations, Cooperativeness

<u>Test Number</u>	<u>Symbol</u>	<u>Explanation</u>
18	M	Masculinity
19	Peer Status	Rank in Company from total votes selecting and rejecting
23	Peer Status on questions 1 & 2 (professional)	
24	Peer Status on questions 3 & 4 (like and dislike)	
25	Peer Status on questions 5 & 6 (professional)	
26	Final grade on graduation from the course	

Peer status was correlated with each of the scales on the Guilford-Zimmerman for significant positive and negative traits. Peer status was compared with GCT/ARI. Peer status was compared with final grade at the end of the course. The three pairs of questions were studied for significant relationship. The third pair of questions was eliminated from the combination for final ranking in peer status on the basis of pre-test correlations. Ranking on the first and second pair of questions were compared separately.

Statistical Treatment

Since the scales were not interval scales, a nonparametric correlation was used. The two measures which were applicable were Spearman rank correlation coefficient rho, and the Kendall rank correlation coefficient tau. Both are suitable with variables which can be measured on an ordinal scale. They are equally powerful in rejecting null hypotheses, having 91 per cent power-efficiency when compared with Pearson's r.

The Spearman was developed earlier, is perhaps better known and is somewhat easier to compute. It was used with computations according to Siegel

(1). Its formula is:

$$r = 1 - \frac{6 \sum d^2}{N^3 - N}$$

Tied scores were given the average of the ranks they would have received if there were no ties. The ranked scores were re-sorted into subject number order so that the comparisons could be made. The sums of the squares of the differences were found and the computations made according to the formula.

CHAPTER IV

RESULTS AND DISCUSSION

Peer Status and School Achievement

As seen in Table I, page 19, a high correlation exists between Peer Status and Final Grade in the course. Coefficients for Company 4, 6, and 8 are .59, .73 and .26 respectively. The correlations of Co4 and Co6 are significant at the 5% level and the correlation of Co8 is almost significant at the 1% level.

There are several points to be considered in reviewing this aspect of the study. The students are aware of the standing of the other members in the group. They have heard the grades on various tests and examinations read aloud in class from time to time. There is a competitive atmosphere in the class, and they are probably also aware, though not as acutely of the quality of the answers and the participation of the other students during class. This is demonstrated repeatedly when an instructor or officer is counseling a student. In discussion of the Company or of the class work students frequently refer to other members of the company whom they consider "smart" or "good" and those whom they consider "bad" or "poor."

Since they share the same dormitory, barracks discussion of class work and exchange of ideas present further clues to the scholastic ability of the individual.

It is reasonable to any student to assume that if in his opinion a class

member is acquitting himself well in class and making creditable grades, he will also be successful in the field.

TABLE I

CORRELATION BETWEEN PEER STATUS AND FINAL GRADE, BETWEEN PEER STATUS AND COMBINED SCORE AND BETWEEN FINAL GRADE AND COMBINED SCORE

Test	Co. 4	Co. 6	Co. 8
Peer Status vs Final Grade	.59**	.73**	.26*
Peer Status vs OCT/ARI	.03	.06	-.04
Final Grade vs OCT/ARI	.49	.32	-.03

*Significant at 1% level.

**Significant at 5% level.

Peer Status and Intelligence Scores

The results of the study demonstrate a near zero correlation between Peer Status and Intelligence Scores as shown in Table I (Co4 .03, Co6 .06, Co8 -.04). This has been explained previously in part by the fact that the students are selected in the classification center and the curriculum of the school is arranged to accommodate a particular intelligence range.

Final Grade in the course yields a significant but unstable correlation with intelligence as indicated by Combined Score. In Co4 and Co6 the r's are

.49 and .32, while in Co8 it is only - .03. It is reasonable to assume that a student with a higher intelligence score can achieve a higher grade in a course designed to accommodate a normal range. However, the r varies from company to company to a marked degree.

Since Peer Selection is highly correlated with Final Grade and since Final Grade is apt to correlate highly with Intelligence we might assume that Peer Status will correlate positively with intelligence. But for these three companies there is near zero correlation between Peer Status and Intelligence.

It is clearly evident that the Corpsman will make his selection or will nominate as a "successful Corpsman" or "best Corpsman" not the student who is intelligent and who makes a high grade, but rather the student who makes a high grade and probably has some qualities manifest in his behavior which the Corpsman sees as necessary for good performance in the field. These qualities might be assumed to be the characteristics of his concept of a "good Corpsman."

However, it is also probable that the quality or qualities that are the basis for the selection may be the ones that also contribute to success and ultimate high grade in the course.

If this is true these qualities and traits will definitely be found in the Corpsmen in the field who are nominated as successful by their peers and by their supervisors. This suggests a further study along this line.

On the other hand these may be the traits of successful men in other Navy occupational classifications or "rates." This prompts further study comparing the peer selection among men in technical "rates" requiring higher intelligence scores and "rates" in which interpersonal responsibility is not as great as

that found in the Hospital Corps.

Peer Status and Temperament Traits

In preparation for the computation of correlations between sets of scores, preliminary study was made of the scores on the sociometric device (Fig. 1.)

The Guilford-Zimmerman Temperament Scores of the four highest and four lowest students in the Sociometric Rank of each company were selected. The number four was chosen because in the sociometric questionnaire (Appendix A) each student was asked to nominate five people. It was felt that the extremes would be most clearly represented if only the four lowest and highest were compared, eliminating the arbitrary changes inherent in "border" cases. An isolate group of four students was selected from the center of each rank - these comprised the group who received no votes or very few votes either accepting or rejecting. It was thought that there might be a distinct pattern established by the isolates.

The Guilford-Zimmerman raw scores for all three groups were listed. The distribution of the scores for these groups was erratic and unpredictable. There was a great deal of overlapping between all three groups. It was apparent that forcing the scores into groups would be misleading and that high acceptance cannot be readily classified as a type. The High, Mid, Low classification were made, however, on the basis of the mean of the averages of scores for each group in each company on each scale. The results are shown on the G-Z Profile Chart, Fig. 1. The most striking thing in the chart is the resemblance between the groups which tends to form a pattern for the group as a whole. This homogeneity may be due to the pre-selection in the classification center. It is explained to a limited degree by the fact that all of the

Fig. 1. PROFILE CHART FOR THE GUILFORD-ZIMMERMAN TEMPERAMENT SURVEY
SCALED SCORES FOR MEN

C SCORE	G General Activity Energy	R Restraint Seriousness	A Ascendancy Social Boldness	S Social Interest Sociability	E Emotional Stability	O Objectivity	F Friendliness Agreeableness	T Thoughtfulness Reflectiveness	P Personal Relations Cooperativeness	M Masculinity (of emotions and interests)	CENTILE RANK	NEAREST T SCORE
10	30 29	30 29 28 27	30 29	30	30 29	30 29	29 28 27 26	30 29 28	30 29 28	30 29 28	99	75
9	28 27	26 25	28 27 26	29 28	28 27	28 27	25 24 23	27 26	27 26	27		70
8	26 25	24 23	25 24 23	27 26	26 25	26 25	22 21	25 24	25 24 23	26 25	95 90	65
7	24 23 22	22 21	22 21	25 24	24 23 22	24 23	20 19 18	23 22	22 21	24	80	60
6	21 20 19	20 19 18	20 19 18	23 22 21	21 20 19	22 21 20	17 16	21 20	20 19 18	23 22	70 60	55
5	18 17 16	17 16	17 16 15	20 19 18	18 17 16	19 18 17	15 14 13	19 18	17 16	21 20	50 40	50
4	15 14 13	15 14 13	14 13 12	17 16 15 14	15 14 13 12	15 14	12 11 10	17 16 15	15 14	19 18	30	45
3	12 11 10	13 12 11	11 10 9	13 12 11 10	11 10 9	13 12 11	9 8	14 13 12	13 12 11	17 16 15	20	40
2	9 8 7	10 9	8 7 6	9 8 7 6	8 7 6	10 9 8	7 6 5	11 10 9 8	10 9	14 13	10 5	35
1	6 5	8 7 6	5 4	5 4 3	5 4	7 6 5	4 3	7 6 5	8 7 6	12 11 10		30
0	4 3 2 1	5 4 3 2	3 2 1 0	2 1 0	3 2 1 0	4 3 2 1	2 1 0	4 3 2 1	5 4 3 2	9 7 5 3	1	25
	Inactivity Slowness	Impulsiveness Rhythymia	Submissiveness	Shyness Seclusiveness	Emotional Instability Depression	Subjectivity Hypersensitiveness	Hostility Belligerence	Thoughtlessness Extraversion	Criticalness Intolerance	Femininity (of emotions and interests)		

FIGURE 1

subjects in all of the companies graduated except two men. The distinction attempted by classification into high and low groups is one of degrees of success and cannot be reliably demonstrated by this method.

In general the isolates presented no interesting individuality and if there is any rough characterization discernable in their scores it could be said to be in the flattened, even pattern of the scores as compared to the High and Low groups. The profile depicts them as less energetic and active than either the High or the Low group - less restrained than the High group and only a little more restrained than the Low group. They appear to be more agreeable and affable than either group and are probably more passive. It is emphasized that these observations are very general though they were found to be predictive of the rank correlations.

Peer Status (Test #19) Correlations with G-Z Scores

In correlating peer status with personality trait scores (Table II) there was only one significant correlation found which held up for all three companies. This was the negative correlation with Test #9 (Ascendance) which was significant at the 1% level. This trait is described by Guilford as:

The person who upholds his rights and defends himself in face-to-face contacts; who does not mind being conspicuous, in fact may enjoy it; who through social initiative gravitates to positions of leadership; who is not fearful of social contacts; who is not inclined to keep his thoughts to himself.

There are two possibilities in explanation of these results: (1) We might feel that to the Hospitalman in the Military situation, success appears to be more likely for the individual who does not voice his thoughts and who is not conspicuous.

TABLE II
CORRELATIONS BETWEEN PEER STATUS (TEST #19) AND SCORES
ON THE GUILFORD-ZIMMERMAN TEMPERAMENT SURVEY

Test #	Co. 4	Co. 6	Co. 8
7 G	- .08	- .03	- .02
8 R	.44	.17	.20
9 A	- .33	- .34	-.25*
10 S	- .57	- .13	- .18
11 E	.22	.08	- .03
14 O	.08	.38	- .06
15 F	.16	- .007	.03
16 T	.29	.17	.16
17 P	- .55	- .14	- .13
18 M	.09	- .02	- .04

*Significant at the 1% level.

(2) Or it might be that this is a trait that is neither desirable for success in the Hospital Corps, according to the evaluation of the other Corpsmen, nor is it well liked. There is indication that the latter explanation is more accurate. When comparison on this trait was made between ranking on Test #23 (Best Corpsman) as compared with ranking on Test #24 (Best Liked) the r's indicated a negative correlation almost twice as high for "liking" as for "best Corpsman." For all three companies the negative correlation was significant at the 1% level for Test #23 and at the 5% level for Test #24.

Guilford has said that there is little to indicate that "submission" accurately describes the negative pole of this trait. Apparently this "ascendance" is manifested by egocentric attitudes, attention demanding and dominating behavior. This is probably similar to the behavior of the rejects of Boney's (8) study and the behavior he referred to in a previous study by Kidd at the University of Michigan. It appears that the Hospitalmen neither like a smart aleck and show off nor do they see him as successful in the field.

Several correlations were found in the scores of Co4 which appeared to be significant. Since the correlations of the particular scale with the peer status for the other two companies did not also yield significant r's the correlations for Co4 were considered to be spuriously high and due to the characteristics of that particular company. It is interesting that there were four such scores, two positive and two negative for this company. The negative correlations were in Sociability (Test #10) $-.57$, and Personal Relations (Test #17) $-.55$, and the positive correlations were Restraint $.44$ (Test #8) and Thoughtfulness $.29$ (Test #16). This is not to say that the r's were inconsistent in positive and negative values between the companies. Where the r's of Co4 were positive the r's of Co6 and Co8 were also positive. The same was true of r's of negative value. There appears to be an emphasis on traits depicting studious and conscientious application to duty.

Almost all of the correlations for Co4 (except one) were higher than the correlations for Co6 and Co8. The difference between Co4 and Co8 might be explained by the number of students in each group - Co4 25 and Co8 37. However, this does not explain the difference between Co4 and Co6 which varied in size by only two subjects. Actually the r's of Co6 and Co8 bore a very close

resemblance and are more probably predictive of a general pattern if one is possible.

Two interesting traits which appear to hold up for all three companies and which approach significant value are Restraint (Test #48 and Thoughtfulness (Test #16).

Guilford says that individuals who have high scores in R usually demonstrate self-restraint and are self-controlled. They are described as serious minded rather than happy-go-lucky, and not cheerfully irresponsible.

He further describes subjects who have high T scores as individuals who are given to meditative and reflective thinking; who are dreamers and philosophically inclined. He says they have curiosity about and a questioning attitude toward the behavior of themselves and of others.

Two consistent and fairly high negative scores appear to stand out also. They are Test #10 S-Sociability and Test #17 P-Personal Relations. Individuals in whom these traits are scored highly are described by Guilford as:

- S: Likes social activity and contacts, formal or informal, likes position of social leadership; has social poise; not shy, bashful or seclusive.
- P: Cooperativeness, tolerance. Low scoring person is given to critical faultfinding generally; has little confidence or trust in others.

It appears that the negative correlation on these two is more indicative of the "student" situation in Corps School than predictive of future success in the field.

In general the low correlations point toward the concept that "each personality is a unique whole." The self-rating inventories as has been pointed out in previous studies, approach the evaluation of a personality on an item by

item, or trait by trait basis, whereas the sociometric choices represent an evaluation of total individuals in regard to their desirability as associates in real life situations. The self-rating scale utilizes primarily the atomistic approach whereas the sociometric measurement utilizes primarily the "whole personality" approach.

CHAPTER V

CONCLUSIONS

In this study of the personality correlates of peer selected Hospital Corps students Hypothesis I is not fully supported. Only one trait, Ascendance of the Guilford Zimmerman Temperament Scale correlated significantly with criteria of success as Corpsmen in all three Companies.

The findings indicated that it is reasonable that the Corpsmen consider other factors than grades in selecting individuals for success. It could be concluded on a general basis that the selectees were possessed of more control of impulsive behavior than the rejects. The other traits, which in combination might be said to distinguish the selectee slightly from the others are his thoughtfulness and reflectiveness and possibly his ability to take a critical view of his problem and speak his opinion. However, the data do not support these conclusions with sufficient strength for a positive conclusion.

According to Bendig's (7) study the traits both positive and negative which yielded high r 's in this study are traits that are influenced by age and tend to change with maturity. The negative r 's of this study can be expected to continue to decline with age, while the positive R or Restraint might be expected to increase with age. If this is true then the Hospitalmen in the current study are selecting the most mature men for success and also like them better than the immature men.

The dispersion of the scores and the generally low r 's emphasize a general

principle which has been mentioned in previous studies. High choice status on any criteria is due probably not to greater amounts of certain desirable traits, but to a more effective integration and use of a variety of traits which are appropriate to a particular kind of situation and which are in accord with the expectations or wishes of a fairly large proportion of the participants in this kind of situation.

The data of this study indicate that those who are given high peer acceptance either in a "professional" consideration or from the standpoint of "social acceptance" do not fall into a "type," and probably do not bear great resemblance to one another. Moreover they are not free from ethically and socially disapproved traits. This does not mean that for successful corpsmen any combination of any traits is as good as another. The data indicate that at least five of the traits distinguished by the Guilford-Zimmerman are related either positively or negatively, at least consistently if not significantly with peer selection in the Hospital Corps.

Hypothesis II is conclusively supported. The data of this study show that peer selection correlates significantly with grades at the end of the course for all three groups of students tested.

Hypothesis III is supported in as much as there is near zero correlation between intelligence scores and peer selection. These findings are indicative that other cues are used by the Corpsmen in making their selections. High peer ratings and high grades are being earned apparently by students other than those with high intelligence scores. It is likely that ability to succeed is demonstrated in other behavior and is a cue for selection by his peers.

SUMMARY

The purpose of this study was to demonstrate on the Guilford-Zimmerman Temperament Survey significant personality correlates of Peer selected Hospital Corpsmen.

The technique used was to give the Guilford-Zimmerman Temperament Survey and a Sociometric Questionnaire to three successive companies of Hospital Corps School students, in the 10th week of their 16 week course. Comparisons were then made between temperament trait scores and peer ratings from the sociometric data; and between peer ratings and course grades. Rho correlations were obtained and significance of findings was determined.

Because of the nature and design of the course it was hypothesized that there would be a high correlation between peer selection and grades at the end of the course. This was found to be true and it is clearly evident that the students are most likely to use the scholastic standing of the individual in the group as a cue for selection for success in the Corps.

It was hypothesized that there would be a positive but insignificant correlation between intelligence scores and peer selection, that is, that high scores would be earned by students other than the most intelligent. This was found to be true to a more conclusive degree than anticipated. There was near zero correlation between peer selection and intelligence.

It was hypothesized that there would be a high correlation between selection by peers on the basis of "liking" and selection for "professional

qualification." This was found to be true but it does not follow that the Corpsman nominates for success only the men he likes. There would not be as significant a correlation between success and grades if selection for success depended too heavily on "liking."

Though the correlations between the peer rating scores and the scores on the various tests of the Guilford-Zimmerman do not come into a significant area in more than one case there are several things to be pointed out in relation to these data:

1. The consistency between the companies is a trend to plus or minus scores.
2. The narrow range or tendency toward a pattern in the groups of scores--the significant difference between high and low groups. This is in accord with the fact that this is a selected group; and that all of these men passed the course except two.
3. The positive and negative traits that are emphasized and their relationships to possible change with increased maturity and development.
4. The fact that this might be the description of a good student rather than a good corpsman which suggests a further study of the Guilford-Zimmerman pattern of Corpsmen working in the field who are selected as successful by their peers and their supervisors.
5. The questions of whether the pattern which tends to appear in the Guilford-Zimmerman scores of all the subjects is similar to other subjects in other selected groups. This suggests a study of the Guilford-Zimmerman scores on such subjects as Radiomen, Electronics Technicians, Gunners Mates, Yeomen, etc.
6. A review of the Restraint and Control emphasized by the Hospitalmen, in

relation to its association with maturity.

7. It is proposed that the data support the general principle that high choice status on any criterion is due probably, not to greater amounts of certain desirable traits, but more likely to an effective integration and use of a variety of traits which are appropriate to a particular kind of situation and which are in accord with the expectations or wishes of a fairly large proportion of the participants in this kind of situation.

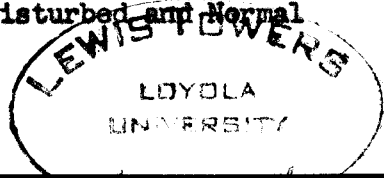
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APPENDIX

Name _____

Billet Number _____

Date _____

SOCIOMETRIC STUDY

(Your responses here will never be shown to anyone connected with HSC)

1. Who are the five men in your company who you think will make the best corpsmen?

2. Who are the five men in your company who you think will make the poorest corpsmen?

3. Who are the five men in your company you personally like best?

4. Who are the five men in your company you personally like least?

5. List five men in your company who seem to have the least trouble fitting in at Hospital Corps School.

6. List five men in your company who seem to have the most trouble fitting in at Hospital Corps School.

APPROVAL SHEET

The thesis submitted by Esther Florence Ramsay has been read and approved by three members of the Department of Psychology.

The final copies have been examined by the director of the thesis and the signature which appears below verifies the fact that any necessary changes have been incorporated, and that the thesis is now given final approval with reference to content, form, and mechanical accuracy.

The thesis is therefore accepted in partial fulfillment of the requirements for the Degree of Master of Arts.

May 28, 1962
Date

Edmund P. Marx
Signature of Adviser